

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Kunihiro Miichi and Hiroyuki Iwao

Application No.: Not Yet Assigned

Group Art Unit: N/A

Filed: Herewith

Examiner: N/A

For: IMAGE COMPARISON APPARATUS,
IMAGE COMPARISON METHOD,
IMAGE COMPARISON CENTER
APPARATUS, AND IMAGE
COMPARISON SYSTEM

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, DC 20231

Dear Sir:

Prior to examination, please amend the above-captioned application as follows:

IN THE SPECIFICATION:

Rewrite the paragraph beginning at page 16, line 18, as follows:

A photograph is repeatedly taken until the check object person coming in front of the camera 14 presses down the check start button 18, and a plurality of photographs are taken. It is preferable that an upper limit of the number of acquired photographs is fixed, so that a photograph is not unnecessarily taken. When the check object person presses down the check start button 18 (step n5), the CPU 42 acquires an image of the check object person immediately after the press of the check start button 18 (step n6).

Insert the following paragraph at page 19, between lines 3 and 4, as follows:

According to the present invention, even if a proper check image can not be obtained at the point of time when a button for check confirmation is pressed down, check confirmation can be made by using another image, so that it becomes unnecessary to repeatedly press down the button, and a check processing can be completed by one button press operation.

Rewrite the paragraph beginning at page 19, line 4, as follows:

In the correspondence of the present invention and the constitution of the foregoing embodiment, the photograph means of the present invention corresponds to the camera 14, 32 of the embodiment or any other equivalent known to those of ordinary skill in the art. Similarly, the photograph object corresponds to the check object person 31, the button for check confirmation corresponds to the check start button 18 and the object detection sensor corresponds to the person detection sensor 15. The memory means corresponds to the memory 43, the registration file 51 or any other equivalent structure known to those of ordinary skill in the art. The display means corresponds to the check result display LED 16, the check count display LED 17 or any other equivalent structure known to those of ordinary skill in the art. It is intended that the specification be considered as exemplary only, with the true scope and spirit of the invention being indicated by the following claims.

Delete the paragraph beginning at page 19, line 17.

IN THE CLAIMS:

Rewrite claim 2 as follows:

2. (Amended) An image comparison method, comprising:

detecting existence of a photograph object;

capturing a plurality of images of the photograph object in a case where the photograph object is detected;

detecting a press of a button for check confirmation;

comparing at least one of the plurality of captured images with information concerning previously memorized registration images when the press of the button is detected; and

outputting a comparison result.

Cancel claims 5-16, and add new claims 17-28 as follows:

17. An image comparison apparatus, comprising:

an object detection sensor for detecting a person to be photographed;

a camera for creating at least one photographic image of said person upon detection by said object detection sensor; and

a check start button for beginning a comparison between said at least one photographic image and photographic images previously stored by said image comparison apparatus in order to determine whether a match exists.

18. The image comparison apparatus of claim 17 further comprising:

an image comparison center apparatus for capturing said at least one photographic image created by said camera and comparing it with said photographic images previously stored.

19. The image comparison apparatus of claim 17 further comprising:

an illumination device for illuminating a subject to be photographed by said camera.

20. The image comparison apparatus of claim 17 further comprising:

a check count display for displaying a number of times a check operation has been conducted.

21. The image comparison apparatus of claim 17 further comprising:

a check result display for displaying results of whether a match exists.

22. The image comparison apparatus of claim 17 further comprising:

a personal identification key for receiving a personal identification code input to be compared with a previously stored personal identification code.

23. The image comparison apparatus of claim 17 further comprising:

a card reader for reading a personal code stored on a card, said personal code to be compared with a previously stored personal code.

24. The method of claim 2 further comprising:

determining that an image acquired immediately after the check start button is pressed is not suitable for comparison; and

selecting a second photographic image for comparison, said second photographic image having been created by said camera prior to said check start button being pressed.

25. The method of claim 24 further comprising:

determining that said second image is not suitable for comparison; and

selecting a third photographic image for comparison, said third photographic image having been created by said camera prior to said second photographic image.

26. The method of claim 24 further comprising:

determining that said second image is not suitable for comparison; and

comparing a personal identification code received at a personal identification key with a previously stored personal identification code to determine whether they match.

27. The method of claim 24 further comprising:

determining that said second image is not suitable for comparison; and

comparing a personal identification code read from an identification card with a previously stored personal identification code to determine whether they match.

28. An image comparison center apparatus, comprising:

an image capture portion for capturing a plurality of photographic images of a person received from a camera;

a memory coupled to said image capture portion for storing said plurality of captured photographic images;

a registration file for storing image data of registered persons; and

a processing unit for successively comparing said plurality of captured photographic images with said image data stored by said registration file in order to determine whether a match exists.

REMARKS

This Preliminary Amendment is being filed in order to place the above-captioned application, which is being filed concurrently herewith, in better form for examination. Favorable action on the application is solicited.

Dated: October 12, 2001

Respectfully submitted,

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MARKED-UP VERSION SHOWING CHANGES MADE

Changes made to paragraph beginning at page 16, line 18:

A photograph is repeatedly taken until the check object person coming in front of the camera 14 presses down the check start button 18, and a plurality of photographs are taken. It is preferable that an upper limit of the number of acquired photographs is fixed, so that a photograph is not unnecessarily taken. When the check object person presses down the check start button 18 (step n5), the CPU 42 acquires an image of the check object person immediately after the press of the check start button 18 (step n6).

Changes made to the paragraph beginning at page 19, line 4:

In the correspondence of the present invention and the constitution of the foregoing embodiment, the photograph means of the present invention corresponds to the camera 14, 32 of the embodiment[, and similarly in the following] or any other equivalent known to those of ordinary skill in the art. Similarly, the photograph object corresponds to the check object person 31, the button for check confirmation corresponds to the check start button 18[,] and the object detection sensor corresponds to the person detection sensor 15[, the]. The memory means corresponds to the memory 43 [or], the registration file 51[, and the] or any other equivalent structure known to those of ordinary skill in the art. The display means corresponds to the check result display LED 16 [and], the check count display LED 17 or any other equivalent structure known to those of ordinary skill in the art. [However, the present invention can be applied on the basis of the technical concept recited in the claims, and is not limited only to the structure of the foregoing embodiment.] It is intended that the specification be considered as exemplary only, with the true scope and spirit of the invention being indicated by the following claims.

2. (Amended) An image comparison method, comprising:

[a step of] detecting existence of a photograph object;

[a step of] capturing a plurality of images of the photograph object in a case where the photograph object is detected;

[a step of] detecting a press of a button for check confirmation;

[a step of] comparing at least one of the plurality of captured images with information concerning previously memorized registration images when the press of the button is detected; and

[a step of] outputting a comparison result.

New claims 17-28 are being added.